

HVAC INSTALLATION BILLS OF QUANTITIES					
Project Name : <b>SANBI KIRSTENBOSCH - WINTER PALACE BUILDING</b>				Date:	2016/04/05
Drawing Reference : <b>14G09-1-V-100</b>				Page	1 of 6
Location : <b>CAPE TOWN</b>				Prepared by: H.R	
Floor level : <b>GROUND STOREY</b>					
<b>BILL NO:1</b>					
<b>PRELIMINARY AND GENERAL ITEMS</b>					
Item N°	Description	Unit	Qty.	Rate	Amount
	Bidders shall allow for all the clauses as referred to in the "Agreement and Schedule of Principal Building Agreement" as issued by the Joint Building Contracts Committee.				
	<b>ALL ITEMS SHALL BE PRICED INDIVIDUALLY AS A LUMP SUM WILL NOT BE ACCEPTABLE!</b>				
	Tenderer shall allow for whatever cost he may consider necessary for Preliminary and General Items to carry out the Mechanical Installations in full, as detailed in the drawings, Specifications and Schedules, which shall include, but shall not be limited,				
1.1	Contract document	Item	1		
1.2	Conditions of contract	Item	1		
1.3	Programme of construction with progress report to be submitted each month	Item	1		
1.4	Storage, transports, plants and tools etc.	Item	1		
1.5	Material and workmanship	Item	1		
1.6	Supervision	Item	1		
1.7	Order of materials	Item	1		
1.8	Health & Safety Compliance as legislated - Refer to attached separate specification document.	Item	1		
1.9	Construction Guarantee will be required.	Item	1		
1.10	Testing & Commissioning of installation	Item	1		
1.11	Overtime	Item	1		
1.12	Own Insurance on plant & equipment onsite	Item	1		
1.13	Site meetings	Item	1		
1.14	Site staff	Item	1		
1.15	Relevant statutory authorities and other organizations	Item	1		
1.16	Conditions for tender	Item	1		
1.17	Installation - shop drawings	Item	1		
1.18	Submission of electrical requirements for Mechanical equipment and installation	Item	1		
1.19	Labelling of equipment	Item	1		
1.20	Operation and maintenance manuals - 1-off paper copies & 3 electronic	Item	1		
1.21	Provision of As-built Drawings and documents	Item	1		
1.22	Equipment submissions	Item	1		
1.23	Inspection and testing certificates Including COC's for electrical work	Item	1		
1.24	Defects liability	Item	1		
1.25	12 months free maintenance & Guarantee	Item	1		
<b>Total (Excl VAT) carried to Final Collection Page R</b>					

HVAC INSTALLATION BILLS OF QUANTITIES						
Project Name : SANBI KIRSTENBOSCH - WINTER PALACE BUILDING					Date: 2016/04/05	
Drawing Reference : 14G09-1-V-100					Page 2 of 6	
Location : CAPE TOWN					Prepared by: H.R	
Floor level : GROUND AND FIRST STOREY						
BILL NO:2						
MECHANICAL VENTILATION SYSTEMS						
Items	Description	Specification				Tender
	<b>VENTILATION FANS - Supply and installation of ventilation fans</b> complete with hanger rods and support brackets, anti-vibration rubber supports, and all required accessories to successfully operate. Fans must be <b>Donkin</b> or <b>AMS</b> equal and approved in performance and construction.	<b>Tag no:</b>	<b>L/s &amp; Pa</b>	<b>Qty</b>	<b>Supplier</b>	<b>Rate</b>
1	Fresh air supply - Inline duct fan -TD 2000/315	FAN_1	150 @ 300	1	AMS	
	<b>2 FANS SHEET METAL DUCTING :</b> Supply and installation of Round galvanised sheet metal ducting complete with hanger rods and support brackets, canvass collars and all required accessories	<b>Diameter (m)</b>	<b>Length (m)</b>	<b>Area (m)</b>		
2,1	FAN_1 (SPIRAL DUCT)	0,250	9,4	7		
		0,200	4,6	4		
	FAN 1 (ROUND DUCT)	0,200	4,3	3		
		0,150	3,22	3		
	<b>FILTERS -</b> intake systems - Washable type <b>WP77</b> supplied by <b>Peter Mccloud</b> or equal and approved supplier. Complete with filter frame and access hatch for filter cleaning purposes. (Side or bottom access as indicated on the drawings)	<b>Width (m)</b>	<b>Height (m)</b>	<b>Qty</b>		
3	FAN G/1 - Fresh air supply axial fans	0,350	0,300	1		
	<b>WEATHER LOUVRES: Supply and installation of Weather Louvers</b> with vermin proofing, bottom access hatches for filter cleaning purposes. The louvers must be <b>AIRGUIDE / AME</b> Equipment or equal and approved.	<b>Width (m)</b>	<b>Height (m)</b>	<b>Qty</b>	<b>Finish</b>	
4	Fan 1 - Fresh air supply	0,350	0,300	1	Anodised	
	<b>SOUND ATTENUATORS -</b> RECTANGULAR, with 150mm wide air gaps and 75mm thick side batts. Equal & approved to <b>Donkin</b> in acoustic performance and construction.	<b>Width (m)</b>	<b>Height (m)</b>	<b>Length (m)</b>	<b>Qty</b>	
5,1	Fan 1 - Intake	0,350	0,300	0,600	1	
	<b>DISC VALVES : Supply and installation of disc valves</b> complete with all necessary fittings, fixings and accessories as scheduled and specified and 1.5m long flexible ducts. Disc valve equal & approved to AME plastic type	<b>Make</b>	<b>Diameter</b>	<b>Qty</b>	<b>Finish</b>	
6,1	Fan 1 - Disc valves c/w 1500mm long flexible ducts	Rickard	Ø200	1	Matt white	
		Rickard	Ø150	6	Matt white	
	<b>7 CONTROLLERS -</b> complete with labels	<b>Infrared</b>	<b>Wired</b>	<b>Qty</b>	<b>Supplier</b>	
7,1	AC UNITS	N/A	Yes	8	AMS	
8	<b>Any additional items necessary to complete the installation to be specifically listed below</b>					
8,1	All ducting to be painted		Item			
Total (Excl VAT) carried to Final Collection Page R						

HVAC INSTALLATION BILLS OF QUANTITIES						
Project Name : SANBI KIRSTENBOSCH - WINTER PALACE BUILDING					Date: 2016/04/05	
Drawing Reference : 14G09-1-V-100					Page 3 of 6	
Location : CAPE TOWN					Prepared by: H.R	
Floor level : GROUND AND FIRST STOREY						
BILL NO:3						
AC UNITS AND ACCESSORIES						
Items	Description	Specification			Tender	
1	AC INDOOR UNITS : Supply and install DX Indoor Units complete with all necessary insulated plenum box ducting for hide away units and canvass collars on (rectangular supply and return air ducting), anti-vibration mountings, wired remote controllers, filter on unit intakes with bottom access hatches, fittings, fixings and accessories as scheduled and specified. Note cooling capacities listed are sensible cooling capacities. AC units must be heat pump units equal and approved to Daikin or Samsung. <b>Some existing AC units will be re-used from another building.</b>	Tag no:	TOTAL COOLING (KW)	SENSIBLE COOLING (KW)	Supplier	Rate Amount
1,1	Midwall unit - FTXN25L	AC_G/1	1,8	1,4	DAIKIN	
1,2	Midwall unit - FTXN35L	AC_G/2	3,0	2,4	DAIKIN	
1,3	Midwall unit - Reuse existing AC unit from old office building - Samsung. High pressure hose de r	AC_G/3	3,0	2,4	EXISTING	
1,4	Midwall unit - Reuse existing AC unit from old office building - Samsung. High pressure hose de rust and thoroughly clean the equipment and ensure operational and in good working order, remove from old offices, re-install in new offices, Replace new refrigerant, supply and install new infra red remote controller, service and commission.	AC_G/4	2,8	2,2	EXISTING	
1,5	Midwall unit - Reuse existing AC unit from old office building - Luxaire. High pressure hose de rust and thoroughly clean the equipment and ensure operational and in good working order, remove from old offices, re-install in new offices, Replace new refrigerant, supply and install new infra red remote controller, service and commission.	AC_G/5	4,3	3,4	EXISTING	
1,6	Midwall unit - Reuse existing AC unit from old office building - Samsung. High pressure hose de rust and thoroughly clean the equipment and ensure operational and in good working order, remove from old offices, re-install in new offices, Replace new refrigerant, supply and install new infra red remote controller, service and commission.	AC_G/6	2,0	1,6	EXISTING	
1,7	Window unit - Reuse existing, High pressure hose de rust and thoroughly clean the equipment and ensure operational and in good working order, remove from old offices, re-install in new offices, Replace new refrigerant, service and commission.	AC_G/7	2,5	2,0	EXISTING	
1,8	Midwall unit - Reuse existing AC unit from old office building - Samsung. High pressure hose de rust and thoroughly clean the equipment and ensure operational and in good working order, remove from old offices, re-install in new offices, Replace new refrigerant, supply and install new infra red remote controller, service and commission.	AC_F/1	4,0	3,2	EXISTING	
2	REFRIGERATION PIPING - complete with support brackets, insulation, all exposed refrigeration pipes must be enclosed in sheet metal trunking. Note the contractors to measure as per the layouts indicated on the drawings and with the sizes confirmed by the suppliers	Tag No:	Total (m)		Rate	Amount
2,1	Midwall unit - FTXN25L	AC_G/1	61			
2,2	Midwall unit - FTXN35L	AC_G/2	38			
2,3	Midwall unit - FTXN35L	AC_G/3	47			
2,4	Midwall unit - FTXN35L	AC_G/4	61			
2,5	Midwall unit - FTXN50L	AC_G/5	79			
2,6	Midwall unit - FTXN35L	AC_G/6	57			
2,7	Window unit	AC_G/7	68			
2,8	Midwall unit - FTXN50L	AC_F/1	23			
3	CONDENSATE DRAIN PIPING - Supply and installation of condensate drain piping complete with insulation, hanger rods, and must be Copper pipes( class 0 or better ) , with all required 75mm p-traps and required accessories	Diameter (mm)	Total (m)			
3,1	Copper Drain pipes	25	104			
3,2	Copper Drain pipes	42	34			
4	Corrosion protection of the outdoor condensing unit coils, base plates, stainless steel replacement screws, frames complete with high pressure hose wash down & combing of fins prior to application. Note bluechem corrosion protection or equal and approved	Qty				
4,1	Outdoor units - Bluechem	8				
Total (Excl VAT) carried to Final Collection Page R						

HVAC INSTALLATION BILLS OF QUANTITIES				
Project Name : SANBI KIRSTENBOSCH - WINTER PALACE BUILDING			Date: 2016/04/05	
Drawing Reference : 14G09-1-V-100			Page 4 of 6	
Location : CAPE TOWN			Prepared by: H.R	
Floor level: GROUND AND FIRST STOREY				
BILL NO: 4				
ELECTRICAL CONNECTION				
Items	Description	Specification	Tender	
1	FINAL ELECTRICAL CONNECTION - Ventilation fans & AC indoor units complete with all required accessories	Qty	Rate	Amount
1,1	Fresh air supply Fans - Fan_1	1		
1,2	AC units - Indoor	8		
1,3	AC units - Outdoor	7		
2	ELECTRICAL - Supply and installation of weather proof isolators and ACDB control panel including the final electrical connection of the equipment	Qty		
2,1	Isolators for outdoor units - Weather proof boxes	8		
2,2	Isolators for indoor units	8		
3	INFRA RED REMOTE CONTROLLERS - Supply and installation of new infra red remote controllers	Qty		
3,1	Infra-red remote controllers with wall mounted cradles for existing AC units to be reused	5		
Total (Excl VAT) carried to Final Collection Page			R	-

HVAC INSTALLATION BILLS OF QUANTITIES						
Project Name : <b>SANBI KIRSTENBOSCH - WINTER PALACE BUILDING</b>					Date:	2016/04/05
Drawing Reference : <b>14G09-1-V-100</b>					Page	5 of 6
Location: <b>CAPE TOWN</b>					Prepared by :H.R.	
Floor level: <b>GROUND AND FIRST STOREY</b>						
<b>BILL NO:5</b>						
<b>BUILDERS WORK</b>						
Items	Description	Specification			Tender	
<b>1</b>	<b>Wall penetration for ducting and Weather Louvers</b>	<b>Width(m)</b>	<b>height (m)</b>	<b>Qty</b>		
1,1	Fan_1 - wall penetration for weather louvre	0,450	0,400	1		
<b>2</b>	<b>Core hole penetrations for AC units refrigeration &amp; drains</b>	<b>Width (m)</b>	<b>Height (m)</b>	<b>Qty</b>		
2,1	Refrigeration and drains					
<b>3</b>	<b>Access hatches for fans</b>	<b>Width(m)</b>	<b>Breadth (m)</b>	<b>Qty</b>		
3,1	Access hatch for Fan_1	0,600	0,600	1		
<b>Total (Excl VAT) carried to Final Collection Page</b>						<b>R -</b>

HVAC INSTALLATION BILLS OF QUANTITIES		
Project Name : <b>SANBI KISTERNBOSCH - WINTER PALACE BUILDING</b>		Date: 2016/04/05
Drawing Reference : <b>14G09-1-V-100</b>		Page 6 of 6
Location : <b>CAPE TOWN</b>		
Floor level : <b>GROUND AND FIRST STOREY</b>		
FINAL COLLECTION PAGE		
Item N°	Description	Amount R c
1	<b>BILL NO:1 PRELIMINARY AND GENERAL ITEMS</b>	
2	<b>BILL NO: 2 MECHANICAL VENTILATION SYSTEMS</b>	
3	<b>BILL NO: 3 AC UNITS AND ACCESSORIES</b>	
4	<b>BILL NO: 4 ELECTRICAL CONNECTIONS</b>	
5	<b>BILL NO: 5 BUILDERS WORK</b>	
6	PROVISIONAL SUM ALLOWANCE, AT THE DESCRETION OF THE ENGINEER	
7	Subtotal (Items 1 to 6)	
8	Add VAT (14% of The item 7 )	
9	Total Contract Value (Items 7 and 8)	
Total Contract Value Carried to Main Contract Bill		R -